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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/030,246 | 01/09/2002 | Masahiro Sasagawa | 0649-0817P | 1963 |

2292 7590 03/25/2003

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EXAMINER

ASINOVSKY, OLGA

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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1711

DATE MAILED: 03/25/2003

6

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
10/030,246

Applicant(s)
Sasagawa et al

Examiner
Olga Asinovsky

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1711

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Jan 9, 2002
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- *See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 3 & 5
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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DETAILED ACTION

The preliminary amendment is noted.

Claim Rejections - 35 U.S.C. § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(A) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 0 299 499.

Claim 1 discloses a hydrogenated block copolymer comprising at least one polymer block mainly comprising a vinyl aromatic hydrocarbon and at least one polymer block mainly comprising a conjugated diene compound, and having a vinyl bounding amount V (%) based on the conjugated diene compound of from not less than 37% to less than 70%, wherein (a) the total hydrogenation ratio H (%) of the unsaturated double bond based on the conjugated diene compound satisfies the following relation formulae: $V < H < 1.25 \times V + 10$; $50 < H < 80$, and wherein (b) the hydrogenation ratio of the vinyl bond is 82% or more.

A block copolymer composition can include a said hydrogenated block copolymer of claim 1 and a polyolefin based resin for the present claim 2.

A block copolymer composition can include the hydrogenated block copolymer and an adhesion-imparting agent for the present claim 6.

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EP'499 discloses a hydrogenated block copolymer composition comprising: (a) a hydrogenated block copolymer comprising at least one polymer block composed of a vinyl aromatic compound and at least one polymer block composed of a conjugated diene compound and (b) at least one thermoplastic substance such as a tackifier resin or thermoplastic resin in the amount of 99 to 1 parts by weight, page 4, lines 40-57. The hydrogenated block copolymer has the vinyl aromatic compound in the amount of 5 to 95 wt.%, the content of vinyl linkages V(%) prior to hydrogenation based on the conjugated diene compound is 10 to 80%, the hydrogenated ratio of the total of aliphatic double bonds derived from the conjugated diene compound is not lower than 5% and lower than 50%, for the present claims 1 and 6.

The vinyl linkages V in the conjugated diene compound in the range of 10 to 80% is overlapping the vinyl bounding amount V (%) in the range 37% to 70% in applicants' claims. The hydrogenated ratio (A) of the total of aliphatic double bonds which originated from the conjugated diene compound in the range 5 to 50 % would be within the scope in applicants' claims ($50 < H < 80$), if select the higher hydrogenated ratio (A) for being 50% in EP'499. The content of a vinyl aromatic compound in the specific hydrogenated block copolymer can be within the range of 5 to 95% by weight, more preferably 15 to 85 wt.%, which can be selected within the range of 5 to 50 wt.% specified in applicants' claim 2.

The thermoplastic resin of component (b) can include polyethylene resin, page 9, line 18, for the present claim 2. The tackifier resin can be present in the amount of 20 to 200 parts by weight,

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page 8, lines 36-37, for the present claim 6. The composition can have an adhesive property, page 8, lines 38-40.

EP'499 discloses that the conjugated diene compound having specified content of the vinyl linkages prior the hydrogenation and the hydrogenation degree are effective on the desired compatibility with the other thermoplastic resins, tackifier resins and bituminous materials and the adhesive property of a block copolymer composition by using the hydrogenated block copolymer, page 5, lines 15-28.

The difference between the present claims and EP'499 is that EP'499 discloses a conjugated diene compound having vinyl linkages prior the hydrogenation, the ratio of the hydrogenation degree in the hydrogenated conjugated diene compound, and the content of the vinyl aromatic compound in the broader ratio than the requirement in the present claims. However, it would have been obvious to one of ordinary skill in the art to select the hydrogenated block copolymer in EP'499 wherein the conjugated diene compound has the vinyl linkages prior the hydrogenating in the range of 37 to 70%, the total hydrogenation ratio of at least 50%, and the content of the vinyl aromatic compound in the range of 5 to 50 wt.% such that being the same as requiring in the present claims. Because reference discloses that the selected conjugated diene compound having vinyl linkages prior a hydrogenation, the hydrogenation degree of a said conjugated diene compound, and an amount of a vinyl aromatic compound are controlled by the desired elasticity, compatibility and adhesive properties of the obtained hydrogenated block copolymer with tackifier resins, thermoplastic resins and bituminous materials.

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Also, reference does not disclose the hydrogenation ratio of the vinyl bond of the hydrogenated block copolymer in the range of more than 82%. However, it would have been obvious to one of ordinary skill in the art to consider that the hydrogenation ratio of a vinyl bond of more than 82% is obtained in EP'499 since the hydrogenation process is controlled by the desired level for obtaining the compatibility properties of said hydrogenated block copolymer with tackifier resin, thermoplastic resin and bituminous materials.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art is relevant to show the state of the art knowledge.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Olga Asinovsky whose telephone number is (703) 308-0041. The examiner can normally be reached on Monday to Friday from 9:00am to 5:30pm.

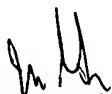
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck, can be reached on (703) 308-2462. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9310 and 703-872-9311 (after final).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

O.A.

O.A.

March 20, 2003


James J. Seidleck
Supervisory Patent Examiner
Technology Center 1700